

**REMARKS**

**Claim Objections and Claim Rejections Under 35 U.S.C. §112**

Claim 6 was objected to as being dependent upon canceled claim 5. Claim 6 has now been amended to depend from claim 1.

Claim 9 stands rejected under 35 U.S.C. §112 in that “the phrase wherein the relationship between the K and the F is prime to each other” is indefinite. This phrase means that the greatest common division of the K and F is “1”.

By this amendment, claim 9 has been amended to read “wherein the K and the F are relatively prime”. The relationship between K and F is discussed in the specification at page 18, lines 27-34. It is submitted that claim 9 now meets all of the requirements of 35 U.S.C. §112.

**Claim Rejections Under 35 U.S.C. §103**

Claims 1, 2, 4, 6, 7, 10, 11, 13-15, 17 and 19-23 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Iwai U.S. Patent No. 6,683,703 in view of newly cited Uchisako et al. U.S. Patent No. 6,896,354. Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Iwai and Uchisako et al. in view of Wakasugi U.S. Patent No. 6,157,937 and claim 9 stands rejected under 35 U.S.C. §103(a) over Iwai and Uchisako et al. in view of Merna U.S. Patent No. 5,239,312.

For the reasons set forth hereafter, it is submitted that the claims, as now amended, patentably distinguish over the prior art.

Patentability of the Claims

Independent claim 1 has been amended to recite that the classificational executer classifies the scan data in compliance with the number of the print passes and the number of the print passes is defined by a print mode of a high definition printing operation and to define that a capacity of a second data storage is less than one page of the scanned data and that the classified scanned data is stored in the second data storage by a unit of one band which is equal to a height of a print head of a printer.

As noted, claim 1 has been amended to recite that the classificational executer classifies the scan data in compliance with the number of the print passes and the number of the print passes is defined by a print mode of a high definition printing operation. Therefore, the multi-function printer of claim 1 can implement the various number of the print passes (see page 23, lines 18-25 in the specification).

By contrast, the printer of the newly cited Uchisako et al. '354 patent has front ink nozzles 4a and back ink nozzles 4b and data of the odd-numbered columns is stored in a front ink nozzle print memory and data of the even-numbered columns is stored in a back ink nozzle print memory. The data is printed out by the front ink nozzles 4a and the back ink nozzles 4b simultaneously by running an ink carriage 5 once. That is, in Uchisako, the number of the print passes for one line is one, and the data is not classified in compliance with the number of print passes.

Moreover, there is no motivation to implement the various number of classifications in Uchisako, because the ink carriage 5 has the front ink nozzles 4a

As the Examiner acknowledges on page 4 of the action, Iwai does not disclose expressly classifying data in compliance with print passes. Iwai only discloses a copy machine including a scanner section 4 and a printer section 6.

Therefore, even if the teachings of Uchisako et al. and Iwai are combined, claim 1 as now amended patentably distinguishes over this combination.

Claim 1 has been amended further to define that a capacity of the second data storage is less than one page of the scan data and the classified scan data is stored in the second data storage by unit of one band which is equal to a height of a print head of the printer. As a result, the capacity of the second data storage can be reduced. This feature is supported in the specification at page 9, lines 1-6.

On the other hand, the printer of Uchisako et al. receives data of one page, and the data of the odd-numbered columns is stored in the front ink nozzle print memory, while the data of the even-numbered columns is stored in the back ink nozzle print memory (see column 20, lines 62-67 of Uchisako et al.). Thus, the capacity of the front and back ink nozzle print memories of Uchisako et al. must be more than one page of the data.

Iwai discloses a copy machine which has a page memory board 82 in an image processing section 315, and a plurality of pages can be stored in the page memory board 82 because Iwai is the copy machine. Therefore, claim 1, as now amended, is patentable over the combination of Uchisako et al. and Iwai.

Independent claims 14, 19, 20 and 21 have been amended in the same manner as claim 1 and therefore are patentable for the same reasons as advanced

Independent claims 14, 19, 20 and 21 have been amended in the same manner as claim 1 and therefore are patentable for the same reasons as advanced with respect to claim 1. Moreover, the dependent claims 2, 4, 6-13, 15-17, 22 and 23 are patentable for the same reasons as advanced for the independent claims from which they depend as well as for the additional limitations contained therein.

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of the rejection and allowance of the claims.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly, Stanger, Malur & Brundidge, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. KYO-101).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

A handwritten signature in cursive script, reading "Gene W. Stockman", is written over a horizontal line.

Gene W. Stockman  
Registration No. 21,021

GWS/sdb  
(703) 684-1120